FILED
10-30-08
11:59 AM

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U338E) for Approval of its 2009-2011 Energy Efficiency Program Plans And Associated Public Goods Charge (PGC) And Procurement Funding Requests.	Application 08-07-021 (Filed July 21, 2008)
And Consolidated Matters.	Application 08-07-022 (Filed July 21, 2008) Application 08-07-023 (Filed July 21, 2008) Application 08-07-031 (Filed July 21, 2008)

ASSIGNED COMMISSIONER'S AND ADMINISTRATIVE LAW JUDGE'S RULING REQUIRING SUPPLEMENTAL FILINGS

Pursuant to Decision (D.) 07-10-032 (Program Planning for 2009-2011 and beyond), D.08-07-047 (Energy Efficiency Savings Goals), D.08-09-040 (California Long Term Energy Efficiency Strategic Plan) and Rulings in Rulemaking (R.) 06-04-010, Southern California Edison Company (SCE), Pacific Gas and Electric Company (PG&E), Southern California Gas Company and San Diego Gas & Electric Company (collectively, the Utilities) are hereby required to revise their applications for 2009-2011 energy efficiency programs and portfolios as set forth in this Ruling and refile their applications at a date to be determined in a subsequent Scoping Order.

1. Background

The Utilities filed their proposed 2009-2011 portfolios on July 21, 2008.

The Utility's filings requested, in total, over $3.7 billion for over 200 energy efficiency programs for 2009 through 2011. The applications represented a substantial undertakings on the part of the Utilities, in conjunction with the Commission staff and the entire California energy efficiency community. We appreciate the efforts of the Utilities in assembling a diverse and substantive set of programs, and in compiling the massive amount of supporting information in their applications. In this Ruling, we seek supplemental information for refiled applications that will build upon the foundations already in place from past years and in the July filings.

The first prehearing conference (PHC) in this proceeding was held on August 11, 2008. At that PHC, Administrative Law Judge (ALJ) Gamson asked parties to file initial comments on the utilities' applications with the understanding that the Utilities would be required to update the applications for compliance issues, to take into account the California Energy Efficiency Strategic Plan (Plan), and other matters. On August 28, 2008, parties filed their initial comments. On September 8, 2008, the utilities filed their responses.

On September 18, 2008, the Commission adopted the California Long Term Energy Efficiency Strategic Plan in D.08-09-040. This decision ordered the utilities to file amendments to their applications to incorporate elements of the adopted Strategic Plan (Plan), when and as directed by the assigned Commissioner and ALJ in this docket. At an October 8, 2008 PHC, ALJ Gamson indicated that a Ruling would issue to identify modifications needed to finalize the Utilities' applications for review, including updates for the Strategic Plan.[1]

As discussed at the October 8, 2008 PHC, Energy Division has been working with the utilities to identify areas where the applications must be modified to comply with previous Commission decisions and Rulings. Specifically, the applications must comply with D.07-10-032 and D.08-09-040, and Rulings in R.06-04-010 issued on February 29, 2008, March 14, 2008, April 11, 2008 and April 21, 2008. Energy Division has also identified additional information needed to fully review the applications.

2. Required Revisions

In D.07-10-032, this Commission stated:

> Assuring a more comprehensive, integrated model for energy efficiency will require a significant shift in the utilities' approach to program design, development and implementation. Although we have consistently encourage the utilities to think and act strategically in designing and delivering energy efficiency programs, the utilities and indeed other leaders in business and government must adopt a conceptual framework that is more comprehensive and forward looking.[2]

The portfolio applications filed on July 21, 2008 are a good faith effort to achieve this broad goal and represent a step forward in some respects. We also recognize the difficulty faced by the Investor-owned Utilities (IOUs) in simultaneously assisting us in the Strategic Plan and

---

[1] On October 16, 2008, the Commission adopted D.08-10-027 to provide bridge funding for up to one year starting January 1, 2009 so as to ensure continuity in programs while the applications are being considered.

[2] D.07-10-032, p. 21.

preparing the 2009-2011 portfolios. However, the IOU portfolios, as filed, do not fully reflect the "significant shift" sought by this Commission or the near term activities identified in the Strategic Plan.

This Commission has set ambitious goals for energy efficiency through 2020 that must be achieved in order to reach the AB 32 greenhouse gas (GHG) emissions targets. As noted in D.08-10-037, Final Opinion on Greenhouse Gas Regulatory Strategies, energy efficiency is the cornerstone of the Commission's approach to AB 32:

> Energy efficiency is the least expensive strategy available to reduce GHG emissions significantly in the electricity and natural gas sectors. We believe that, in order to meet the GHG reduction goals of AB 32, more energy efficiency is required. With intensified efforts in building and appliance standards and utility programs, and with new strategies and technologies, the State can capture all cost-effective energy efficiency. In this decision, we reaffirm our commitment to a bold and aggressive approach to realize significant new reductions in energy consumption and GHG emissions via energy efficiency measures."

It is imperative that the 2009-2011 portfolios achieve cost-effective energy savings and lay a solid foundation and path for the 2020 goal. This requires a careful weighing of short-term savings versus longer-term benefits and certainty versus innovation. It also requires that this Commission ensure that the utilities achieve their goals cost-effectively by minimizing administrative costs, ensuring rapid turn over of ineffective programs and measures, and increased use of statewide programs to achieve economies of scale.

This Ruling lays out a number of modifications that are required to produce applications that adhere to applicable Decisions and Rulings, provide sufficient information to assess the merits of the individual programs and portfolios as a whole, and adequately and accurately reflect policy direction from the Commission.

A. DEER Values

1. Commission Mandates

The Commission has clearly and repeatedly directed the IOUs to use the ex-ante values provided in the Database of Energy Efficiency Resources (DEER) for the purposes of filing energy efficiency portfolio plans and forecasting savings and other program impacts. In April, 2005, the Commission directed utilities in D.05-04-051 to use DEER values for energy efficiency portfolio filings: "To the extent possible, the assumptions that are used to estimate load impacts (*e.g.*, kWh, kW and therm savings per unit, program net-to-gross ratios, incremental measure costs and useful lives) in the calculation of the TRC and PAC tests shall be taken from [DEER]."[3] This mandate was reiterated in several subsequent Commission Decisions on the energy efficiency programs and a number of Rulings.

- D.06-06-063, Ordering Paragraph (OP) 3 directed the IOUs to use DEER values during implementation of 2006-2008 energy efficiency portfolios: " When rebalancing their portfolios and reporting program accomplishments during the program cycle, the utilities shall: "Use DEER values for peak kW and kilowatt hour (kWh) savings for those measures that are included in the DEER database; Continue to use their best estimates of those values for measures that are not currently included in DEER, or for programs with measure categories rather than specific measures, such as customized rebate programs."
- OP 12 of D.06-06-063 requires the IOUs to use DEER values.

[3] Rule IV.11. to the Energy Efficiency Policy Manual version 3.

- D.07-10-032 required the utilities to "ensure full compliance with (Energy Efficiency) Policy Rules,"[4] including those rules summarized below requiring use of Energy Division-approved ex-ante DEER values, wherever available.

- The April 11, 2008 Assigned Commissioner's Ruling (ACR) directed the IOUs to use draft or final DEER[5] values for 2009-2011 energy efficiency portfolio planning:
  Finally, we direct the IOUs to use the draft or final DEER 2008 Update numbers, as available in their 2009-2011 portfolio planning and in the May 15, 2008 filing (both base case and second higher carbon value scenario). This will have the benefit of using the latest available information on load shapes, measure lifetimes, and operating hours, in turn applied to consistent 2007 Renewable Portfolio Standard MPR numbers. IOUs should also use draft DEER measure grouping parameters for additional scenario analyses in their 2009-2011 applications to assess the likely portfolio impacts of updated net-to-gross (NTG) and estimated useful life (EUL) parameters.[6]

- The May 5, 2008 ACR, extended the deadline for IOU filing of the 2009-2011 energy efficiency portfolio plan applications from May 15, 2008 until June 23, 2008, "to allow the IOUs to incorporate the final DEER 2008 Update for these (DEER) 2009-2011 planning measures." That Ruling required the IOUs to "file their 2009-2011 energy efficiency portfolio applications on June 23, 2008. These applications shall incorporate available final DEER 2008 Update values."

- The June 2, 2008 ACR required use of final DEER 2008 Update values, posted on May 30, 2008, in the IOUs 2009-2011 energy efficiency portfolio applications. The Ruling extended the deadline for IOU filing of the 2009-2011 applications specifically

---

[4] D.07-10-032, p. 70.

[5] Available at: http://www.energydataweb.com/cpuc/

[6] The Ruling stated "All of the draft DEER numbers are expected to be available before the end of April, 2008. Final DEER numbers are expected to be available by July 2008."

to allow sufficient time for IOU incorporation of these DEER values: "We recognize that the DEER data files are extensive and that some values may require utilities to re-shape their intended efficiency portfolios to ensure the upcoming applications meet adopted efficiency goals, are cost-effective, and also incorporate new activities to support important new approaches identified in the strategic plan. In order to allow further time for the utilities to incorporate DEER 2008 update values and restructure their portfolios accordingly, and also best reflect the proposed strategic plan, we will extend the application date until July 21, 2008."

- The August 6, 2008 Ruling approved Version 4.0 of the Energy Efficiency Policy Rules and highlighted the DEER requirement in Rule IV.11. The only exception to this rule occurs when DEER values for a measure do not exist: "If the required cost-effectiveness test inputs for a measure to be included into a portfolio are not available in DEER, documentation supporting the inclusion of new information from alternate sources must be provided to Energy Division for review and approval prior to the inclusion of that measure's use in a savings claim or to a portfolio filing's approval. Cost-effectiveness parameters for non-DEER measures should be developed using methods and data from DEER to the extent possible."[7] The Ruling further noted that the Energy Efficiency Policy Manual Version 4.0 is applicable to both the 2006-2008 and 2009-2011 energy efficiency program cycles.

2. Utility Non-Compliance with Commission Mandates for ex-ante DEER values in 2009-2011 energy efficiency portfolio applications

The utilities have failed to comply with the numerous directives to use Energy Division-approved ex-ante planning DEER values finalized in May-June, 2008 (2008 DEER) as the basis of their 2009-2011 energy efficiency portfolio plans. Shortly before filing their 2009-2011 energy efficiency portfolios, utility

[7] Energy Efficiency Policy Manual Version 4.0, Rule IV.11.

representatives notified Energy Division staff of their intention to use "utility-preferred" ex-ante DEER values in a limited number of instances. Utility staff believes that for these measures, their preferred ex-ante DEER assumptions are more appropriate for portfolio planning purposes than those currently included in DEER. The utilities also stated they would provide detailed work papers in their filing to substantiate their claims to alternative DEER values. The affected measures are listed below:

Electric Measures:

- Residential compact fluorescent lamps (CFLs);
- Nonresidential linear fluorescent fixtures and controls;
- Appliance recycling;
- Customized Savings NTG;
- Agricultural Measure NTG; and
- Select Heating, Ventilation and Air Conditioning (HVAC) measures;

Gas Measures:

- Nonresidential cooking;
- Nonresidential water heating;
- Attic & Wall insulation; and
- Greenhouse measures

The 2008 DEER update preceded the utilities' July 21, 2008 energy efficiency portfolio filings and reflect the results of the most up-to-date studies available. We direct the utilities to use the 2008 DEER values as the basis for a fully-developed base case scenario in the refiling of their 2009-2011 energy efficiency portfolio plans. We also require the utilities to use the 2008 DEER values as the basis for any additional scenarios that incorporate "utility preferred" policy proposals. The only exception for the use of Energy Division-approved 2009- 2011 DEER values in either a base case or utility preferred scenario will be for those few cases for which DEER values do not exist, in which case procedures outlined in the Energy Efficiency Policy Manual must be followed.

We also direct the utilities to correct their E3 calculator spreadsheets with the 2008 DEER values. An Energy Division memorandum outlining the required changes will be issued shortly.

B. E3 Cost-Effectiveness Calculator Output Files

In its review of the utilities' E3 Cost-Effectiveness Calculator Output (E3) files for the 2009-2011 Energy Efficiency Portfolio Applications, Energy Division discovered additional concerns pertaining to the submitted E3 Output files. Energy Division has provided each utility a detailed list of concerns specific to its output files. The utilities are directed to continue to work with Energy Division to resolve these issues and to correct all E3 Output concerns identified by Energy Division in the revised portfolios. The following is a summary of the issues:

1. Format and Content of Submission
In general, the utilities' submissions were not provided in compliance with the required format; specifically, measure groupings were to be defined in a consistent manner across all utilities with the submitted E3 Calculators using common measure group definitions and naming conventions. Not all utilities used all common measure groups; the content of each utility submission was to be based on those measures included in each utility portfolio.

2. Customized Measures
Energy Division directed the utilities to further subdivide the customized measure category into more specific measure groups to allow for review; the utilities in general failed to carry this directive out. For example: HVAC equipment must be subdivided into the major expected measure groups such as chillers, packaged a/c, fans and pumps, or other appropriate measures; HVAC envelope must be subdivided into windows, insulation, cool roofs, or other appropriate measure groups; Interior

lighting must be subdivided into interior or exterior, linear fluorescent, CFLs, or other appropriate measure group; process must be subdivided into pump off controllers, or other appropriate measure groups.

3. Measure Cost and Incentives Dollar Amounts
Energy Division determined that many values for gross measure cost, incentives and participant costs appear inconsistent. In many cases this inconsistency resulted in the inclusion of a negative participant cost in the utilities' E3 Cost Effectiveness Calculator Output files. For example, in the consumer electronics category, utilities indicated a gross measure cost of $0.46 along with a $15.63 up-stream/mid-stream incentive resulting in a negative participant cost of $15.17.

4. Measure Energy Impacts
In many cases, Energy Division was not able to easily compare the utility-entered energy impacts values to the 2008 Update ex-ante DEER values for the measure. We direct the utilities to provide additional information to Energy Division as needed to allow for their review and confirmation that DEER values were used as the basis for savings estimates for measures where DEER values are available.

5. Load Shapes and TOU Adjuster
In some cases, utility's selections for measure load shapes do not appear to be the most appropriate options. For example, the 'Residential Customized Other Category' has the "HorizAxisClothesWasher-RC" load shape selected; for the 'Residential Water Heating Other Category' the "AC_Cooling-RC" was selected.

6. Early Retirement versus Replace-On-Burnout Measures
Energy Division determined that many retrofit measures included in the utilities' filing appear to mix Effective Useful Life and costs for Replace-On-Burnout assumptions with energy impacts for Early Retirement assumption. This appeared to be the case for fluorescent lighting system measures and perhaps many HVAC a/c and process measures, for instance. We direct the utilities to provide Energy Division with further information on the Early Retirement versus Replace-On-Burnout assumptions for lighting, HVAC and process measures to enable Energy Division review of the EUL/RUL; in

addition, costs and savings values must be adjusted to properly represent Early Replacement or Replace-On-Burnout assumptions.

7. Natural Gas Impacts
All lighting measures as well as many HVAC (both equipment and envelope) measures have natural gas as well as electric impacts. Most lighting measures have a negative (added consumption) natural gas impact while many HVAC measures can have a positive (reduced consumption) natural gas impact. We require the utilities to include both electric and natural gas impacts and the resultant ratepayer avoided costs in their E3 inputs and TRC/PAC calculations in the Supplemental filing.

C. Application Table Templates and Calculations

Prior to the July portfolio filings, the Energy Division and the utilities agreed to table templates for use in their filings. However, Energy Division found inconsistencies in the utilities' derived and/or aggregated summary data in the energy savings and budget tables that prevented an accurate assessment and comparison of the information across all the utilities.

Energy Division found that the largest inconsistencies in the tables were linked to utility use of incorrect DEER and other input values in the E3 spreadsheets, as summarized above. As a result, summary energy savings and budget estimates provided in the required savings/budget tables were not reliable. The utilities also failed to clearly label information provided in the tables, and one utility failed to include the required tables in their filing at all.

To address these and related issues, Energy Division staff met with the utilities in September, 2008. Energy Division staff and the utilities discussed each of the Energy-Division provided table templates and agreed on modifications to the existing tables to make them more consistent across the utilities in terms of content, format, and labeling. The utilities also agreed to provide one set of tables for the "base case scenario" and another set for any "utility preferred" scenario" in the refiled portfolios. AppendixA to this Ruling summarizes the required changes to the table templates. We direct the utilities to incorporate the agreed changes as outlined in Appendix A into their refiled applications and to adhere to any additional budget templates provided in an Energy Division memorandum in a subsequent Ruling.

D. Detailed Budget Information and Budget Template

In all cases, the budget information from the utilities was not sufficiently detailed to allow for adequate review of the proposed budgets. This problem is magnified by the high administrative costs claimed by the utilities. We direct the utilities to provide additional information on detailed budget breakdowns for administrative, overhead, and other costs, for the total portfolio and for each program using templates outlined in an Energy Division memorandum and contained in a subsequent Ruling. The templates shall be accompanied by a clear explanation of and justification for the unreasonably high administrative costs of these programs. We expect the utilities to thoroughly review their administrative costs and explore every opportunity to reduce the level of administrative costs.

E. Base-case Scenario

As discussed above, the utilities used “utility preferred” DEER values for certain measures as the basis for their savings estimates and portfolio design. The utilities also stated their intention to propose “utility preferred” policies that they deemed necessary to create a framework to support their portfolios. Some of the “utility preferred” policies would, if adopted, act to reopen and reverse very recent Commission’s Decisions deciding these issues. “Utility preferred” policies falling in this category include: a) rejection of cumulative savings goals and accounting methodologies adopted in D.04-09-060 and clarified in D.07-10-032; b) the use of net goals as the basis for determination of the utility Performance

Earnings Basis (PEB) under the Risk Reward Incentive Mechanism adopted in D.07-09-043 and reaffirmed in D.08-07-047; and, c) as discussed above, repeated Commission's requirements that the utilities utilize Energy Division-approved DEER values as the basis for their energy efficiency portfolio planning and accomplishment reporting.

In a Ruling released on March 14, 2008, we directed utilities to "identify, in their May 15, 2008 [Energy Efficiency Strategic Plan] and proposed portfolio filings, proposed changes to the forthcoming Version 4.0 of the (energy efficiency policy) Manual . . . ." These Rules implement the Commission's decisions; they do not and cannot reflect changes to Commission policy. As detailed above, the Commission has not authorized utility deviance from Energy Division-approved ex-ante DEER values. Nor has it authorized utility's deviance from the Commission's approved-policies. As a group, the "utility preferred" policy approaches included in the utilities 2009-2011 energy efficiency portfolio application seek to disregard existing Commission's Decisions and far exceed the scope of the March 14, 2008 Ruling inviting a limited set of policy alteration proposals from the utilities.

Further, the Utilities incorporated nearly a dozen additional policy proposals as the foundational basis of their 2009-2011 energy efficiency portfolio plans, while the base case scenario incorporating Commission-approved policies is presented as an afterthought. Consequently, it was often difficult or impossible to determine what comprised the utilities' base case scenario.

In the refiling of their portfolios, we direct the utilities to:

- Use the base case scenario as the quantitative foundation of their applications and

- The base case must comply with the Commission's Decisions, Rulings and the Energy Efficiency Policy Manual, version 4.0, including as noted above and including:
    - Use of cumulative goals and accounting methodologies;
    - Net basis for determining PEB, and;
    - Use of Energy Division-approved ex-ante DEER values for 2009-2011 Planning Purposes.

The utilities may use alternate policy scenarios included in their July 21, 2008 filing, as part of a secondary "utility preferred" scenario. However, this "utility preferred" scenario must, as with the base case scenario:

- Use cumulative goals and accounting methodologies;
- Use net basis for determining PEB;
- Use Energy Division-approved ex-ante DEER values for 2009-2011 Planning Purposes;
- Provide information as required in the Energy-Division provided budget/savings tables, and;
- Clearly label savings and budget tables as the base case or the "utility preferred"policies or scenario in every instance.

Both the base case and an optional utility preferred scenario must also consider the impacts on the scenario of utilizing a $30/metric tonne carbon adder value, as directed on April 21, 2008. These additional scenarios must include a rebalancing of energy efficiency measures and programs advanced in the portfolio to achieve a realistic portfolio TRC.

F. Big/Bold Programmatic Initiatives

Our February 29, 2008 Ruling ordered the utilities to address each topic in a comprehensive outline of information requirements for their 2009-2011 energy efficiency program applications, stating "The program applications must reflect State energy policy, energy efficiency program initiatives discussed in

D.07-10-032, and the Joint Utility Strategic Plan . . . ." Chapters 1 and 2 (and to a lesser extent Chapter 3) in that outline contained specific information requirements for the utilities necessary for them to meet the requirements of Ordering Paragraphs 12, 13, 14 and 20 of D.07-10-032.

The utilities did not provide sufficient levels of information to assess the utility's plans to implement the Commission-adopted Energy Efficiency Big/Bold Programmatic Initiatives,[8] or of sector-specific plans to develop coordinated and effective programs that lead to market transformation. Specific weaknesses in these narratives are indicated in Appendix B. By failing to submit this information, the utilities did not fulfill the requirements of OP 20, sub-paragraphs 3, 6, 7, 8, and 12 of D.07-10-032, as well as portions of OP 13, especially sub-paragraphs 7 and 8. In some cases, specifically in the SCE and PG&E applications, partial information was included elsewhere in the applications. But the information was partial, scattered and not cohesively summarized in a single location as required.

Of greatest concern is the absence, across all utility's portfolios, of "well integrated planning" for at least three of four dimensions as required by D.07-10-030, OP 20, subparagraph 8. The dimensions are: coordination across all stages of technology and program development including codes and standards, leveraging the contributions from a variety of (non-utility) actors and financial resources, and identifying an "end game" for each technology or practice that transforms decisions to become either "standard practice" (or "market

[8] Zero net energy homes and commercial buildings by 2020 and 2030 respectively; and optimizing the HVAC industry in California. *See* D.07-10-032.

transformation"), or incorporated into minimum codes and standards."[9] At a minimum these dimensions were expected for the four programmatic initiatives (including the low income initiative)[10] and for as many other of the 2009-11 implementation programs as was feasible in order to align utility's portfolios with the then-Strategic Plan (June 2008 utility version).

Finally, the February 29, 2008 Ruling required utilities to provide clear budget and energy savings information on the Energy Efficiency Programmatic Initiatives. This information was not always provided.

In their refiling, we direct the utilities to provide the Energy Efficiency Programmatic Initiative and strategic planning information for each sector as required in D.07-10-032, OP 20 and in our February 29, 2008 Ruling. We also direct them to correct the omissions outlined in Appendix B. This information must be provided in a clear, concise and thorough format. We will determine in subsequent Rulings where such information should be presented in the refiled applications (*i.e.*, in utility testimony, the Program Implementation Plans (PIPs) for the sector, or both). In addition, we direct the utilities to comply with the February 28, 2008 Ruling and provide clear "estimates of budgets and savings for these new approaches [the Big Bold Energy Efficiency Programmatic Initiatives], including those that may not be realized in the 2009-11 period."

---

9 D.07-10-032, OP 20, #8, p. 147. The fourth dimension of "strategies that explicitly . . . overcome identified market barriers" is addressed to greater or lesser extents across the four utility filings.

10 D.07-10-032, OP 20, #12, p. 148)

G. High-Quality Program Implementation Plans

Additional information requirements contained in the Energy Division outline issued on February 29, 2008, pertain specifically to the contents of utility's PIPs. Appendix B to Attachment A of that Ruling specified the information that must be contained in each utility's PIP in order to ensure that the application as a whole and each program met the information requirements specified in D.07-10-032, OPs 20, 12 and 13. Energy Division reviewed each PIP contained in the utility's applications against the information requirements contained in Appendix B. Although the utilities varied significantly in their inclusion of the required information – with SCE demonstrating significantly higher compliance levels – in general, the utility's PIPs failed to provide the required information.

In the September meetings, utility representatives indicated that in some cases, such information exists or had been gathered since the July 21, 2008 utility's filing and could be provided. An Energy Division memorandum containing a list of compliance failures for information expected to be provided in the utility's PIPs, a list of additional information requests, and PIP templates will be provided in a subsequent Ruling. The utilities shall correct the information gaps indicated, and shall use these templates for their revised PIPs.

H. Program Specific Information Gaps

The utilities failed to provide sufficient information in several additional program areas as required in Commission Decisions or Rulings. These areas are: residential on-bill financing programs, lost opportunities and statewide emerging technologies programs.

In general, the utilities failed to provide in their applications "an evaluation of the prospects for on-bill financing programs for residential customers," as required by D.07-10-032, OP 20, although they did include programs for institutional and commercial on-bill financing. While we commend the latter, we cannot halt investigation of feasible means of stimulating the former. First-cost financing barriers significantly reduce the participation of residential customers in energy efficiency programs. Additionally, the utilities did not sufficiently discuss "strategies to minimize lost opportunities," as required in D.07-10-032, OP 20, #7. We direct the utilities to include the required information in their Supplemental filing.

With regard to emerging technologies programs, D.07-10-032 directed "utilities' to demonstrate compliance with Rule II.6 of the Energy Efficiency Policy Rules regarding linkages between R&D, emerging technologies, and program commercialization."[11] Energy Division staff issued a Memorandum on May 23, 2008, indicating information to be included in the utilities' 2009-2011 energy efficiency portfolio plans to comply with the Commission's directive. In general, the utilities did not supply the requested information. We direct the utilities to fully comply with the Memorandum in their Supplemental Filing.

I. Incorporation of Near Term Activities Identified in the Commission Strategic Plan

The Commission adopted the Strategic Plan in September, 2008 in D.08-09-040. That Decision directs the utilities to file amendments to their 2009-2011 energy efficiency program applications to incorporate elements of the adopted Strategic Plan as directed by the assigned Commissioner and/or Administrative Law Judge.[12] We now require the utilities to revise the 2009-2011

---

[11] D.07-10-032, p. 70.

[12] D.08-09-040, OP 2.

energy efficiency program applications with significantly enhanced or new program designs and strategies that clearly identify utility actions for all Strategic Plan near term strategies and action steps for which a utility role is identified as appropriate.

The utilities shall also demonstrate that their 2009-2011 energy efficiency programs reflect the short-term steps and milestones laid out in the Strategic Plan for the programmatic initiatives identified in D.07-10-032 and for each sector or cross-cutting action area.

In developing their programs, we call the IOUs attention to the following language from the Plan:

> Additionally, the *Plan* recognizes that the process of market transformation cannot and should not be driven by ratepayer-funded utility programs alone. While utilities will play a continued role in stimulating market transformation across sectors, each of the cross-cutting areas described in this *Plan* represents an avenue **where non-utility actors may well be better positioned to drive the "push" of new technologies to market, or the "pull" for customers and business to adopt available efficiency technologies or practices.**

For portions of the Strategic Plan that do not specifically identify non-CPUC partners as key actors for specific strategies or actions (chapters 7-12), the utilities shall align their portfolios with strategies and actions included in the Strategic Plan for all areas for which a utility role can be reasonably inferred. This alignment shall include the provision of short term action steps, objectives and milestones for the 2009-2011 period and beyond.

J. Coordinated, Streamlined Statewide Initiatives

D.07-10-032 established criteria by which the 2009-2011 applications would be reviewed, including, "do the plans provide for adequate statewide coordination of similar program offerings?"[13] The February 29, 2008 ACR directed the utilities to provide:

> "[A]n explanation of how the programs take advantage of opportunities for statewide coordination of similar program offerings . . . This explanation must also address coordination that will be taken with other IOUs in order to promote better economies of scale and streamlining of programs, as well as how the program will advance statewide coordination with retailers and other entities.

The February 29, 2008 Ruling also requires the utilities to undertake efforts to create statewide coordination across Third Party Partnerships programs and to expand statewide consistency in Local Government Partnerships.[14]

The portfolio applications reveal that efforts to create statewide coordination, streamlining of programs, and achievement of economies of scale have not made a discernable impact on program design. The draft portfolios contain over 260 distinct programs, most of which contain a varying number of measures. In any given sector, the programs may vary widely within a utility portfolio and have little or relationship to sectoral programs in other utility territories. The portfolios also reveal dramatically different approaches in some sectors; for example, PG&E's Local Government programs are resource programs while SCE treats Local Government programs as non-resource, marketing and outreach programs. At the most basic level, the utilities have failed to use consistent terminology for measures and standardized budget categories so that the 260 programs must be reviewed, tracked, evaluated, measured and verified separately.

---

[13] D.07-10-032, p. 72, OP 20, subpara. 7.

This scattershot approach is highly inefficient, creates unnecessary administrative costs for ratepayers, and confusion for consumers. It also inhibits this Commission's ability to evaluate the relative merits of these programs, develop best practices to improve future programs, and to identify programs and measures that are suboptimal. In short, the portfolios show little effort to create statewide programs that cross utility territories and leverage the work and

[14] February 29, 2008 Assigned Commissioner's Ruling, R.06-04-010, Attachment A, pp. 3, 4, and 5.

resources of the other utilities. This is not a sustainable approach from any perspective.

In contrast, the Commission has required a "significant shift" in program design and has taken the lead to create a new unifying statewide brand that includes an effective program for Marketing, Education and Outreach (ME&O), that takes into account the evaluation of current ME&O activities and industry best practices. This ME&O initiative will integrate and improve the wide array of ME&O activities that have had limited success or have failed to achieve consumer awareness and action. The single, statewide ME&O brand will be implemented consistently by the utilities in their territories and while each utility can tailor aspects of the statewide message to achieve results with specific audiences, they must ensure consistency with the statewide program.

The Commission has ordered the utilities to develop statewide programs in no uncertain terms. We direct the utilities to use two approaches for rethinking and reshaping the programs for all other sectors. First, is the ME&O approach, where a single utility is managing, with all utilities' input, third party deliverers of a single, statewide approach. This approach is particularly well suited to initiatives where leveraging of resources is critical, such as emerging technologies and workforce education and training. The second, approach that is to ensure that utility offerings are coordinated (*i.e.*, the same) across a number of areas, including: a) program name; b) incentive levels offered; c) same or very similar delivery mechanisms; d) same or very similar marketing materials; e) regular inter-utility coordination; f) on-going review and adoption of best practices and feed-back from program evaluations across the utilities; and, g) intra-utility coordinated actions with state, local and federal agencies and other key actors.

We are well aware that California is very diverse in population, climate zones and development and that some goals require tailored approaches. We are also aware that some innovative approaches may resist standardization in the early stages of testing and implementation. However, it is not impossible to accommodate statewide consistency and streamlined portfolios with innovation.

The revised utility portfolios must contain a solid base of a limited number of core, statewide programs for each sector with consistent measures and approaches. These programs should also leave room for adaption for different markets and conditions or innovative approaches. The portfolios shall also contain innovator pilots as appropriate to develop new programs that are likely to achieve long-term goals. To the extent that this approach will not work in any program area, the utilities must provide facts and analysis on the specific conditions that render coordination infeasible. Finally, to simplify and facilitate inter-utility coordination, each utility shall identify a lead point person for each statewide program within each utility, and, an overall lead for statewide programs for each of the four utilities.

Finally, we must reduce very significantly the overall number of programs. We envision no more than 10 core statewide programs and perhaps another 20-30 for the entire suite of utility portfolios (not including third-party programs).

K. Demand-Side Management (DSM) Integration

The Joint ACR of April 11, 2008 reiterated the goals for integrating demand side programs and stated the intent “to better coordinate across the entire range of DSM programs so as to leverage opportunities to maximize energy saving offerings to customers."[15] The ACR identified priority IDSM areas required to be included in program planning including integrated audit development and program delivery coordination combining energy efficiency, demand response, distributed generation and other applicable incentives for the same project.

The integrated program plans presented by the utilities do not comply with this Ruling. Specifically for existing buildings, applicable programs must expressly indicate how the Ruling's direction on integrated audits will be accomplished. We direct the utilities to review the specific guidance offered today in Appendix C and to re-submit descriptions of applicable programs revealing sufficient detail to indicate compliance with this guidance.

More specifically, we direct the utilities to include only demand-side technologies eligible for inclusion in energy efficiency, low-income energy efficiency, demand response, Self-Generation Incentive Program, and California Solar Initiative programs in any designated "integrated programs" that form part of their energy efficiency applications. In addition, while integrated programs should promote all eligible technologies, the resulting combination of measures should be determined by the customer.

In the refiled portfolio applications, utility integrated programs shall be designed to develop technologies, measures and approaches which promote integration more broadly, including emerging technologies, infrastructure improvements and market reforms. We also direct the utilities to consider and include in their portfolios incentive options for programs that promote higher levels of integration within the boundaries established by existing programs.

---

[15] D.07-10-032, p. 2.

Utilities shall also include a well described plan for the evaluation of integrated programs and a timeline for completing a technology integration roadmap in their refiled applications.

3. Partial Schedule

We will issue a Scoping Ruling in the near future. The Scoping Ruling will address a number of topics, including which policy issues will be considered within the scope of the proceeding. The Scoping Ruling will also lay out the expected schedule leading to a final decision in this proceeding. At this time, we will state that the revised portfolios will not be required to be filed before January 15, 2009. After the supplemental filings and responses, we will hold another PHC to update the schedule.

For various reasons, we have experienced significant delays in this proceeding. In order to prevent more delays, we direct the utilities to work closely with the Commission's staff and consultants on the revisions and enhancements to the portfolios required in this Ruling to ensure that the refiled portfolios are fully consistent with all Commission directives on the energy efficiency programs. We further direct staff to provide all further direction or information requests to the utilities in writing and to post the documents and responses on www.californiaenergyefficiency.com website in order to efficiently track the progress of the portfolio revisions.

IT IS RULED that:

1. The Utilities shall refile their July 21, 2008 and 2009-2011 energy efficiency portfolio applications to include the information discussed in this Ruling no later than the date set forth in the upcoming Scoping Ruling. The refiled applications will not be due before January 15, 2009.

2. In their refiled applications, the utilities shall use Energy Division approved Database of Energy Efficiency (DEER) 2008 planning values as the basis for a fully-developed base case scenario for 2009-2011 energy efficiency portfolio plans. We also require the utilities to use the 2008 DEER values as the basis for any additional scenarios that incorporate "utility preferred" policy proposals. The only exceptions will be for those small number of cases for which DEER values do not exist, in which case procedures outlined in the Energy Efficiency Policy Manual must be followed.

3. The utilities shall correct their E3 Cost-Effectiveness Calculator spreadsheets as indicated herein and in an Energy Division memorandum outlining the required changes in a subsequent Ruling.

4. The utilities shall incorporate the agreed changes to their Application Tables as outlined in Appendix A in their refiled applications, and shall adhere to any additional budget templates provided in an Energy Division memorandum in a subsequent Ruling.

5. The utilities shall provide a clear explanation for the high administrative costs of their programs. This explanation shall accompany budget and administrative cost information that must be provided by the utilities in the format specified in Energy Division budget templates to be provided in a subsequent Ruling. The utilities shall thoroughly review their administrative costs and explore every opportunity to reduce these costs.

6. In their refiled applications, the Utilities shall:

- Use a base case scenario as the quantitative foundation of their applications. This base case and any additional "utility preferred" scenarios must comply with the Commission's Decisions, Rulings and the Energy Efficiency Policy Manual, version 4.0, including:

  - Use of cumulative goals and accounting methodologies;
  - Net basis for determining PEB; and
  - Use of Energy Division-approved DEER values.
- Propose any desired additional policy changes, including those not mentioned above yet included in their July 21, 2008 filing, as a secondary "utility preferred" scenario.
- The Utilities shall consider the impacts on the scenario of utilizing a $30/tonne carbon adder value in both the base case and an optional utility preferred scenario. These additional scenarios must include a rebalancing of energy efficiency measures and programs advanced in the portfolio to achieve a realistic portfolio Total Resources Cost.
- Provide savings and budget tables clearly labeled as to which "utility preferred" policies are included in summary energy savings and budget information, in every instance.

7. In their refiled application, the Utilities shall provide the Energy Efficiency Programmatic Initiative and sectoral strategic vision information as described above required in Decision (D.) 07-10-032, Ordering Paragraph 20 and in our February 29, 2008 Ruling. This information must be provided in a clear, concise and thorough format and must correct the omissions outlined in Appendix B.

8. The Utilities shall comply with the February 28, 2008 Ruling in Rulemaking 06-04-010 and provide clear "estimates of budgets and savings for these new approaches (the Big Bold Energy Efficiency Programmatic Initiatives), including those that may not be realized in the 2009-11 period."

9. The Utilities shall comply with the February 28, 2008 Ruling in Rulemaking 06-04-010 and provide the requested information in revised Program Implementation Plans (PIPs) comprising part of their refiled application. The PIP information provided shall address gaps identified in an Energy Division memorandum listing compliance failures and additional

information requirements – as well as the requirements of several new PIP templates – that will be provided in a subsequent Ruling.

10. In their refiled applications, the Utilities shall provide information as required in D.07-10-032, specifically requirements on on-bill financing and strategies employed to avoid lost opportunities. The Utilities shall also provide more detailed information on emerging technologies programs as indicated in the May 23, 2008 Energy Division memorandum as well a additional Energy Division memoranda and templates to be included in a subsequent Ruling.

11. We direct the Utilities to revise their 2009-2011 energy efficiency program applications with significantly enhanced or new program designs and strategies that clearly identify utility actions for all Strategic Plan near term strategies and action steps for which a utility role is identified as appropriate. The utilities shall also demonstrate that their 2009-2011 energy efficiency programs reflect the short-term steps and milestones laid out in the Strategic Plan for the programmatic initiatives identified in D.07-10-032 and for each sector or cross-cutting action area. For portions of the Strategic Plan that do not specifically identify non-CPUC partners as key actors for specific strategies or actions (chapters 7-12), the utilities shall align their portfolios with strategies and actions included in the Strategic Plan for all areas for which a utility role can be reasonably inferred. This alignment shall include the provision of short term action steps, objectives and milestones for the 2009-2011 period and beyond.

12. In their refiled applications, the revised utility portfolios must contain a solid base of a limited number of core, statewide programs for each sector with consistent measures and approaches as described herein. These programs should leave room for adaption for different markets and conditions or innovative approaches. The portfolios shall also contain innovator pilots as

appropriate to develop new programs that are likely to achieve long-term goals. To the extent that this approach will not work in any program area, the Utilities must provide facts and analysis on the specific conditions that render coordination infeasible. Each Utility shall identify a lead point person for each statewide program within each utility, and, an overall lead for statewide programs for each of the four utilities.

13. In the refiled applications, the utilities shall comply with the Joint Assigned Commissioner's Ruling (ACR) of April 11, 2008 to better coordinate across the entire range of demand-side management programs as described above and in the ACR. The Utilities shall clearly indicate how, for existing buildings, applicable programs must expressly indicate how the Ruling's direction on integrated audits will be accomplished. We direct the utilities to review the specific guidance offered today in Appendix C and to re-submit descriptions of applicable programs revealing sufficient detail to indicate compliance with this guidance. The Utilities shall include in their refiled applications the additional information on integration issues as requested herein.

14. We direct the utilities to work closely with the Commission's staff and consultants on the revisions and enhancements to the portfolios required in this Ruling to ensure that the refiled portfolios are fully consistent with all Commission directives on the energy efficiency programs. We further direct staff to provide all further direction or information requests to the utilities in writing and to post the documents and responses on www.californiaenergyefficiency.com website in order to efficiently track the progress of the portfolio revisions.

15. Utilities shall work with Energy Division to develop programs that comply with this Ruling.

Dated October 30, 2008, at San Francisco, California.

/s/ DIAN M. GRUENEICH	/s/ DAVID M. GAMSON
Dian M. Grueneich	David M. Gamson
Assigned Commissioner	Administrative Law Judge

INFORMATION REGARDING SERVICE

I have provided notification of filing to the electronic mail addresses on the attached service list.

Upon confirmation of this document's acceptance for filing, I will cause a Notice of Availability of the filed document to be served upon the service list to this proceeding by U.S. mail. The service list I will use to serve the Notice of Availability of the filed document is current as of today's date.

Dated October 30, 2008, at San Francisco, California.

/s/ JEANNIE CHANG
Jeannie Chang

Appendix A

IOU Application Tables for 2009-2011 filings:

TABLE No.	DESCRIPTION	Agreements
Table 1.1 and Charts	**IOU Projected Annual Savings Impact by Year** *(compared to CPUC goals 2009-2015)*	→Table and Charts will reflect Gross savings and Gross Goals →Will indicate that savings values include LIEE and C&S
Table 1.2 and Charts	**IOU 2009-2011 Total Projected Savings Impacts by End Use** *(by Res and NonRes, crosscutting, LIEE, C&S; by end-use – budget and savings vs. CPUC goals)*	→Table and Charts will reflect Gross savings and Gross Goals →Administration and marketing costs will be excluded →C&S Budget will be shown →LIEE Savigs will be shown; LIEE Budget will not be shown.
Table 1.3 and Charts	**IOU 2009-2011 Projected Savings Impact by Market Sector** *(by market sector, crosscutting, LIEE, C&S; by end-use – budget and savings vs. CPUC goals)*	→Table and Charts will reflect Gross savings and Gross Goals →Administration and marketing costs will be excluded →C&S Budget will be shown →LIEE Savings will be shown; LIEE Budget will not be shown.
Table 1.4	**Portfolio Measure Grouping** *(unit goals and **GROSS** energy savings by Res/NR, by deemed vs. customized, by measure groups for **TOTAL portfolio** – % of portfolio savings; also weighted NTG and EUL by measure group)*	→Measure Groupings will follow rolled-up formats and groupings as directed by DEER team →Gross Savings will be shown
Table 1.5	**IOU Partnership Measure Grouping** *(GROSS energy savings by Res/NR, by measure groups, by end use – % of portfolio savings)*	→Measure Groupings will follow rolled-up formats and groupings as directed by DEER team →Gross Savings will be shown
Table 1.6	**IOU Third Party Portfolio Measure Grouping** *(GROSS energy savings by Res/NR, by measure groups, by end use – % of portfolio savings)*	→Measure Groupings will follow rolled-up formats and groupings as directed by DEER team →Gross Savings will be shown
Table 1.7	**Total Resource Cost (TRC) – Gross Savings** *(total costs, savings, net benefits, B/C ratio, levelized costs for total portfolio)*	→Calculate TRC using Gross Savings →Place side-by-side with Table 1.7 A
Table 1.7 A	**Total Resource Cost (TRC) – NET Savings** *(total costs, savings, net benefits, B/C ratio, levelized costs*	→Calculate TRC using Net Savings →Place side-by-side with Table 1.7

TABLE No.	DESCRIPTION	Agreements
	for total portfolio)	
Table 1.8	**Program Administrator Cost (PAC) – Gross Savings** *(total costs, savings, net benefits, B/C ratio, levelized costs for total portfolio)*	→Calculate PAC using Gross Savings →Place side-by-side with Table 1.8 A
Table 1.8 A	**Program Administrator Cost (PAC) – NET Savings** *(total costs, savings, net benefits, B/C ratio, levelized costs for total portfolio)*	→Calculate PAC using Net Savings →Place side-by-side with Table 1.8
Table 1.9	**IOU Program List** *(program number, program name, market sector, program type, and program status – existing, new, revision of existing)*	→No Differences, no Change
Table 2.1	**Annual Environmental Benefits (electric)** Using $15.50/tonne GHG escalation for CO2 *(electric emission reduction - CO2, NOx, PM10 – by year from 2009-2015 as measured by E3 calculator)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings
Table 2.1 A	**Annual Environmental Benefits (electric)** Using $30/tonne GHG escalation for CO2 *(electric emission reduction - CO2, NOx, PM10 – by year from 2009-2015 as measured by E3 calculator)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings
Table 2.2	**Annual Environmental Benefits (gas)** Using $15.50/tonne GHG escalation for CO2 *(gas emission reduction - CO2, NOx, PM10 – by year from 2009-2015 as measured by E3 calculator)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings
Table 2.2 A	**Annual Environmental Benefits (gas)** Using $30/tonne GHG escalation for CO2 *(gas emission reduction - CO2, NOx, PM10 – by year from 2009-2015 as measured by E3 calculator)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings
Table 2.3	**2009-2011 Lifecycle Environmental Benefits** Using $15.50/tonne GHG escalation for CO2 *(lifecycle electric and gas emission reduction - CO2, NOx, PM10 - as measured by E3 calculator)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings

TABLE No.	DESCRIPTION	Agreements
Table 2.3 A	**2009-2011 Lifecycle Environmental Benefits** Using $30/tonne GHG escalation for CO2 *(lifecycle electric and gas emission reduction - CO2, NOx, PM10 - as measured by E3 calculator)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings
Table 2.4	**IOU 2009-2011 Green Building Initiative (GBI) Summary** Using $15.50/tonne GHG escalation for CO2 *(programs contributing to GBI, and for each program, breakdown by state, federal/local, and commercial buildings – budget, program impacts, and emissions reductions)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings →PG&E will list each program, as specified
Table 2.4 A	**IOU 2009-2011 Green Building Initiative (GBI) Summary** Using $30/tonne GHG escalation for CO2 *(programs contributing to GBI, and for each program, breakdown by state, federal/local, and commercial buildings – budget, program impacts, and emissions reductions)*	→Indicate if C&S and LIEE are counted →Use Gross energy savings →PG&E will list each program, as specified
Table 3.1	**IOU 2009-2011 Projected Cumulative Savings Impact by Year** *(cumulative impacts – GWh, GW, and MMTH – for 2009-2011 program cycle only; 2009 through 2015 vs. CPUC goals)*	→Utilities will use May 30, 2008 DEER *ex ante* numbers
Table 3.2	**IOU 2009-2011 Projected Cumulative Savings Impact by Year (starting from 2004)** *(cumulative impacts – GWh, GW, and MMTH – from 2004; 2009 through 2015 vs. CPUC goals)*	→Utilities will use the following data sets: →For 2004-2005, EM&V results to be used if available. If not available, EEGA-reported results are to be used. →For 2006-2007, use the 2008 DEER Update →For 2008, use the 2008 DEER Update →For 2009-2011, use the May 30, 2008 DEER *ex ante* numbers
Table 3.3	**2009-2011 Projected Lifecycle Savings** *(GWh and MMTH savings)*	→Use Gross energy savings.
Table 3.4	**Third Party Programs and Charts** *(program name, proposed budget, GROSS energy savings, by Flight # and those renewed - % of total portfolio)*	→ Sempra will exclude Administrative Costs

TABLE No.	DESCRIPTION	Agreements
Table 3.5	**IOU Partnership Programs** *(program name, proposed budget, GROSS energy savings,)*	
Table 4.1	**IOU Portfolio Budget** *(breakdown of total budgets by year for electric and gas budgets, by program type - Core, LGP, 3PP, by program; EM&V – total for 3 years, % of total with and without EM&V)*	
Table 4.2	**IOU Portfolio Budget by E3 Formats** *(breakdown of total budgets for 2009-2011 using E3 output formats and showing percentage budget distribution by major category.*	→**New Table**
Table 5.1	**EM&V Budget** *(broken down into CPUC/ED and IOU process evaluation)*	→Utilities will note how EM&V budget is derived in a footnote.
Table 6.1	**Bill Payer Impacts** *(electric and gas average rate, total avg. first year bill savings, total avg. lifecycle bill savings, for 2009-2011)*	→Show present and proposed average rates by major customer class
Table 6.2	**IOU Budget by Funding Source and Chart** *(sources of funds – electric and/or gas PGC, procurement EE, unspent/uncommitted, and % share of funding by source)*	

(END OF APPENDIX A)

Appendix B

Omissions in utility sector narratives provided in July 21, 2008 filing:

- clear rationales for why strategies will work (including why program designs or marketing strategies will drive demand to the participation or energy savings levels targeted; this should include a clear rationale for why any financial incentives or other motivating features were selected and will be sufficient, including working in tandem with other market factors or trends).
- current market penetration baseline and indication of timelines and future milestones to reach an end game or market transformation, or at least demonstrate the utility has thought about how to maximize market penetration.
- evidence of coordination across stages of technology and programs, *e.g.*, from PIER and ET through to codes & standards or MT.
- leveraging other (non-utility) funds and key actors.
- statewide coordination of similar IOU offerings, as well as statewide coordination (of implementation or marketing activities) with retailers or other relevant market players.
- evidence as to how the market presentation of a program will advance coordination across DSM objectives.

(END OF APPENDIX B)

Appendix C

Characteristics Expected of Enhanced Energy Audit

- **Verifiable**: Shall follow a CPUC or CEC-staff accepted protocol and use energy improvement measures and costs published in public databases.
- **Site-specific**: Shall utilize customer-specific energy consumption data incorporated by easy means, acknowledging the trade-offs with *user-friendliness.*
- **User-friendly**: May be implemented by either a host customer or a professional auditor (with possible option for going into greater detail if the user so desires).
- **Comprehensive**: Shall identify both gas and electric DSM measures in audit, including EE, DR, and DG, as well as optimization technology across these measures.
- **Accessible**: Can utilize any accurate medium, including on-line or other automated means.
- **Compatible with CSI program**: Shall combine energy audit findings with appropriate solar calculator results into a report on energy improvement opportunities, allowing customers to understand the relative costs of pursuing the full range of DSM options.

Expected Integrated Audit Report Content

- Current Load/Estimated annual consumption and bill (using utility supplied 12 month history or a proxy calculation).
- Estimated size, output, and cost of any proposed DG system (Solar Hot Water, Solar PV, or other DG resource), including estimates both "before' and "after" all cost effective EE and DR measures are installed.
- A comprehensive list of cost-effective DSM measures applicable to that site.
- An estimated cost and annual energy savings (as $ and % of bill) of each EE measure.
- Payback analysis or IRR for individual EE and solar measures, listed in ascending order of fastest payback or descending order of return on investment, and aggregate savings of bundled measures.

- A list of building energy use assessment services and tools available for use by the building owner for further investigation – for commercial buildings this shall include information on available retro-commissioning services.
- Affirmation with signature that customer has read and understands the information. This affirmation must be available to CSI Program Administrators and other DSM programs.

(END OF APPENDIX C)